

WHAT IS CLAIMED:

1. A wireless communications device comprising:
 - a power amplifier configured to transmit information to a wireless communications network during a first time interval and configured to avoid transmitting information during a second time interval;
 - a circuit substrate coupled to the power amplifier;
 - a power source configured to provide power to the power amplifier; and
 - first and second conductors, coupled to the power amplifier and to the power source, having respective overlapping and non-overlapping portions on the circuit substrate.
2. A wireless communications device according to Claim 1 wherein the first and second conductors comprise first and second etch runs coupling the power source to the power amplifier.
3. A wireless communications device according to Claim 1 wherein the circuit substrate comprises a printed circuit board or a flexible circuit board.
4. A wireless communications device according to Claim 1 wherein the first conductor is configured to conduct a first current in a first direction to the power amplifier and the second conductor is configured to accept a second current in a second direction, opposite the first direction, from the power amplifier.
5. A wireless communications device according to Claim 4 wherein the first and second currents comprise first and second Direct Currents (DC) switched on/off at a frequency in a range between about 50 Hz and about 217 Hz responsive to operation of the power amplifier.
6. A wireless communications device according to Claim 1 wherein the respective over-lapping portion of the first conductor extends on a lower layer of the circuit substrate beneath the respective over-lapping portion of the second conductor on an upper layer of the circuit substrate.

7. A wireless communications device according to Claim 6 wherein the respective over-lapping portions define about an orthogonal angle with one another.

5 8. A wireless communications device according to Claim 6 wherein the overlapping and non-overlapping portions of the first conductor continuously extend on the lower layer and the overlapping and non-overlapping portions of the second conductor continuously extend on the upper layer.

10 9. A wireless communications device according to Claim 8 wherein the continuously extending first and second conductors define first and second partially overlapping zigzag patterns relative to one another.

15 10. A wireless communications device according to Claim 6 wherein the overlapping and non-overlapping portions of the first and second conductors alternately extend between the lower layer and the upper layer.

20 11. A wireless communications device according to Claim 8 wherein the alternately extending first and second conductors define first and second partially overlapping zigzag patterns relative to one another.

12. A wireless communications device according to Claim 6 wherein the lower layer and the upper layer comprise layers that are either separated by one or more other layers or are immediately adjacent layers.

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13. A wireless communications device according to Claim 1 wherein a spacing between immediately adjacent overlapping portions of the first and second conductors is based on a frequency with which current to the power amplifier is switched.

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14. A wireless communications device comprising:
a power amplifier configured to transmit information to a wireless communications network during a first time interval and configured to avoid transmitting information during a second time interval;

5 a circuit substrate coupled to the power amplifier;
a power source configured to provide power to the power amplifier; and
first and second conductors on the substrate, coupled to the power amplifier
and to the power source, continuously extending on lower and upper layers of the
circuit substrate respectively to define first and second partially overlapping zigzag
patterns relative to one another.

10 15. A wireless communications device according to Claim 14 wherein a
spacing between immediately adjacent overlapping portions of the first and second
conductors is based on a frequency with which current to the power amplifier is
switched.

15 16. A wireless communications device according to Claim 14 wherein the
first conductor is configured to conduct a first current in a first direction to the power
amplifier and the second conductor is configured to accept a second current in a
second direction, opposite the first direction, from the power amplifier.

20 17. A wireless communications device according to Claim 16 wherein the
first and second currents comprise first and second Direct Currents (DC) switched
on/off at a frequency in a range between about 50 Hz and about 217 Hz responsive to
operation of the power amplifier.

25 18. A printed circuit board comprising:
first and second etch runs on a circuit substrate coupling a power amplifier to a
power source, and configured to conduct first and second respective opposing currents
to/from the power amplifier to reduce electromagnetic coupling from the first and
second etch runs to a hearing aid proximate to the wireless communications device.

30 19. A wireless communications device comprising:
a power amplifier configured to transmit information to a wireless
communications network during a first time interval and configured to avoid
transmitting information during a second time interval;
a circuit substrate coupled to the power amplifier;
a power source configured to provide power to the power amplifier; and

first and second conductors on the substrate, coupled to the power amplifier and to the power, having respective overlapping and non-overlapping portions alternately extending between a lower layer of the substrate and an upper layer of the substrate.

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20. A printed circuit board configured for use in a radotelephone comprising:

a circuit substrate configured to couple a power amplifier to a power source; first and second conductors on the substrate, coupled to the power amplifier and to the power, having respective overlapping and non-overlapping portions alternately extending between a lower layer of the substrate and an upper layer of the substrate.